

# HiFill® PBT GF20

Polybutylene Terephthalate

Techmer Engineered Solutions

## Message:

HiFill® PBT GF20 is a Polybutylene Terephthalate (PBT) product filled with 20% glass fiber. It can be processed by injection molding and is available in North America. Primary characteristic: flame rated.

| General Information                                     |                                  |                   |             |
|---|----------------------------------|-------------------|-------------|
| Filler / Reinforcement                                  | Glass Fiber,20% Filler by Weight |                   |             |
| Appearance  | Colors Available                 |                   |             |
| Forms   | Pellets                          |                   |             |
| Processing Method                                       | Injection Molding                |                   |             |
| Physical  | Nominal Value                    | Unit              | Test Method |
| Specific Gravity  | 1.43                             | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow (3.18 mm)                      | 0.60                             | %                 | ASTM D955   |
| Water Absorption (24 hr)                                | 0.080                            | %                 | ASTM D570   |
| Hardness  | Nominal Value                    | Unit              | Test Method |
| Rockwell Hardness (R-Scale)                             | 118                              |                   | ASTM D785   |
| Mechanical  | Nominal Value                    | Unit              | Test Method |
| Tensile Strength (Break)                                | 121                              | MPa               | ASTM D638   |
| Tensile Elongation (Break)                              | 5.0                              | %                 | ASTM D638   |
| Flexural Modulus  | 6890                             | MPa               | ASTM D790   |
| Flexural Strength                                       | 165                              | MPa               | ASTM D790   |
| Impact  | Nominal Value                    | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.18 mm)                     | 85                               | J/m               | ASTM D256   |
| Thermal   | Nominal Value                    | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 210                              | °C                | ASTM D648   |
| CLTE - Flow   | 2.5E-5                           | cm/cm/°C          | ASTM D696   |
| Electrical  | Nominal Value                    | Unit              | Test Method |
| Volume Resistivity                                      | 1.0E+16                          | ohms · cm         | ASTM D257   |
| Dielectric Strength <sup>1</sup>                        | 19                               | kV/mm             | ASTM D149   |
| Flammability  | Nominal Value                    | Unit              | Test Method |
| Flame Rating  | HB                               |                   | UL 94       |
| Injection   | Nominal Value                    | Unit              |             |
| Drying Temperature                                      | 121                              | °C                |             |
| Drying Time   | 4.0                              | hr                |             |
| Rear Temperature  | 232 to 274                       | °C                |             |
| Middle Temperature                                      | 232 to 274                       | °C                |             |
| Front Temperature                                       | 232 to 274                       | °C                |             |
| Processing (Melt) Temp                                  | 232 to 246                       | °C                |             |

|                  |                |     |
|------------------|----------------|-----|
| Mold Temperature | 65.6 to 82.2   | °C  |
| Back Pressure    | 0.345 to 0.689 | MPa |
| Screw Speed      | 30 to 60       | rpm |

NOTE

1. Method A (Short-Time)

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